distal fragment. On no occasion has there been failure to accomplish a satisfactory reduction and fixation by this method. A similar technique has been applied quite satisfactorily to fractures of the metatarsals, which fractures usually occur also through the necks of these bones.

Fractures of the Phalanges:—In these bones also the fractures may be ununited or may be united with the fragments in malposition. Quite frequently the proximal fragment is flexed and the distal fragment extended at the fracture line, forming an angle which appears on the palmar surface as a prominence which may be quite sensitive because of its exposure to excess pressure. Frequently this may interfere mechanically with flexor tendons and this, together with the dorsal angulation, prevents closure of the digit during flexion. A lateral approach to the phalanx has given adequate exposure. If united, the fracture line is reformed, if ununited the fracture surfaces are cleared. A technique similar to that described for the metacarpal has been successful in maintaining a good reduction.

The proximal and middle phalanges are easier to handle than ununited or deformed fractures of the distal phalanx. In the latter the lateral approach is made, avoiding the finger nail or its matrix. The fragments here are too small and short to use intra-medullary pegs, as applied in the other sites. With chisels and other such instruments it is difficult to shape mortices in these fragments without breaking up the cancellous bone, of which they are composed. I have found, however, that by using a hand drill, multiple drill holes can be made in line in each fragment, from the exposed surface. It is an easy matter if the drill holes are well overlapped to break down the small amount of bone intervening between the holes to form a continuous mortice in each fragment. Naturally, this mortice must be placed so that the deformity at the fracture line will be overcome. A bar of bone removed from the tibia or elsewhere is shaped to fit this mortice and can easily be slipped into place in both fragments. On all occasions it has held the fracture satisfactorily, and if the graft is made to fit snugly no other form of internal fixation has been required.

Satisfactory union has occurred in all the fractures operated upon in this way. The deformity has been overcome and the patients are more than satisfied with the improved appearance. There has been no infection in any of the wounds. The functional results have been good in some and fair in others, but on all occasions none of the patients have suggested that they would prefer amputation.

While many surgeons have applied these principles, this report is presented as more evidence supporting conservative reconstructive surgery in fractures of this sort. There may be the objection that cortical bone of tibia has been used for the grafts, on the grounds that cancellous bone provides better osteogenesis. From my experience I prefer the tibial bone because it is stronger, is better to work with and provides more secure internal fixation, and the fact that all the fractures have united is evidence that while cancellous bone may provide more osteogenic tissue, this cortical bone provides adequate and probably excess osteogenesis.

Conclusions:—Ununited and malunited fractures of the small bones of the extremities under good conditions are better treated by conservative methods with open reduction and bone graft.

EFFECTS AND TREATMENT OF BLISTER GAS

The ever present threat of gas warfare makes it imperative that there should be repeated instruction in the methods of defence and treatment.

Manual No. 4* of the series of publications in the subject presents in great detail information required by First Aid and Rescue parties in dealing with gas poisoning. We select one item only for reproduction here, of blister gas and its treatment.

The illustration shows the effect of one drop of blister gas, half the size of a pinhead (about 1 mm.) applied to two different parts of the

arm (A and B). One drop (A) was removed a minute afterwards and anti-gas ointment rubbed in for half a minute. As may be seen the only visible effect is a slight erythema. In area B the drop was left untreated and the result was the large blister seen. This developed several hours later. It took about eight weeks to heal, and left a permanent scar.

* Defence Against Gas. Manual No. 4, First Aid and Nursing for Gas Casualties. I. M. Rabinowitch. Published by authority of I. A. Mackenzie, Minister of Pensions and National Health, Ottawa, Canada, 1942.